A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : B32B 27/04,27/38,31/06,31/16,31/26; A47G 01/12,35/00 IPC(8) : B32B 27/04,27/38,31/06,31/16,31/26; A47G 01/12,35/00			
US CL : 428/13,38,98,220,221,295.1,297.4,320.2,322.2,413,414,415,416,417,418,542.2,542.4,542.6,913.3 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols)			
U.S.: 428/13,38,98,220,221,295.1,297.4,320.2,322.2,413,414,415,416,417,418,542.2,542.4,542.6,913.3			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where ap		Relevant to claim No.
x	US 5,619,814 (HERRNDOBLER) 15 April 1997; column 5, lines 11-34, column 6, line 1		19-21,24,27-29,31
A	through column 7, line 67.		1-18,22,23,25,26,30
x	US 6,357,103 (SIKORSKI) 19 March 2002; column	4, lines 7-36.	19-21,27-29,31
Α			1-18,22-26,30
Α	US 4,327,143 (ALVINO et al) 27 April 1982; see entire document.		1-31
Α	US 4,360,456 (FIRTH) 23 November 1982; Abstract, column 3, lines 1-41.		1-18,25,26,30
Α	A US 5,154,959 (DEI ROSSI) 13 October 1992; see entire document.		1-31
A	A US 5,652,031 (COMMANDA) 29 July 1997; see entire document.		1-31
Further documents are listed in the continuation of Box C. See patent family annex.			
Special categories of cited documents:		"T" later document published after the inte date and not in conflict with the applic	rnational filing date or priority ation but cited to understand the
	defining the general state of the art which is not considered to be of relevance	principle or theory underlying the invention of particular relevance; the	
"E" earlier ap	plication or patent published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be considered when the document is taken alone	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination	
"O" document	referring to an oral disclosure, use, exhibition or other means	being obvious to a person skilled in th	e art
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family	
Date of the actual completion of the international search		Date of mailing of the international search report 0.4 JUN 2004	
	(19.05.2004)	Authorized officer	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US		I le die I held	
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